

What is claimed is:

1. A method for reducing the level of acrylamide in a dough-based food product, comprising adding a water soluble multivalent cation to said food product before heating.
2. The method of claim 1, wherein said water soluble multivalent cation is selected from the group consisting of calcium, zinc, magnesium, copper, aluminum, or mixtures thereof.
3. The method of claim 1, wherein said multivalent cation comprises calcium lactate.
4. The method of claim 1, wherein said multivalent cation comprises calcium chloride.
5. The method of claim 1 wherein said multivalent cation is not complexed or chelated.
6. The method of claim 1, comprising:
 - (1) adding a water soluble multivalent cation to a dough;
 - (2) forming a snack piece from the dough; and
 - (3) cooking the snack piece to form a fabricated snack.
7. The method of claim 6, wherein said water soluble multivalent cation comprises calcium lactate.
8. A method for reducing the level of acrylamide in a food product, comprising adding a water soluble multivalent cation to said food product before heating, wherein said water soluble multivalent cation is selected from the group consisting of zinc, magnesium, copper, aluminum, or mixtures thereof.
9. The method of claim 8, wherein said water soluble multivalent cation is not complexed or chelated.
10. The method of claim 8, comprising:
 - (1) adding a water soluble multivalent cation to a food material, wherein said food material comprises asparagine;
 - (2) optionally mixing the cation with the food material;
 - (3) allowing a sufficient time for the cation to complex; and

- (4) heating the food material to form the finished food product.
11. The method of claim 8, comprising:
- (1) optionally peeling potatoes;
 - (2) optionally washing potatoes;
 - (3) slicing potatoes to form potato slices;
 - (4) optionally rinsing the potato slices;
 - (5) optionally blanching the potato slices;
 - (6) optionally cooling the potato slices;
 - (7) adding a water soluble multivalent cation to the potato slices;
 - (8) optionally drying the potato slices;
 - (9) frying the potato slices to form potato chips.
12. The method of claim 8, comprising:
- (1) optionally peeling potatoes;
 - (2) optionally washing potatoes;
 - (3) cutting potatoes to form potato strips;
 - (4) optionally rinsing the potato strips;
 - (5) optionally blanching the potato strips;
 - (6) optionally cooling the potato strips;
 - (7) adding a water soluble multivalent cation to the potato strips;
 - (8) optionally drying the potato strips;
 - (9) optionally coating the potato strips; and
 - (10) par-frying the potato strips to form par-fries.
13. The method of claim 8, comprising:
- (1) cooking potatoes to form cooked potatoes;
 - (2) forming a wet mash from the cooked potatoes;
 - (3) adding a water soluble multivalent cation to the wet mash;
 - (4) drying the wet mash to form dehydrated potato products.
14. The method of claim 8, wherein said multivalent cation comprises calcium lactate.
15. The method of claim 8, wherein said multivalent cation comprises calcium chloride
16. The method of claim 1, wherein the acrylamide level is reduced by at least about 10%.

17. The method of claim 8, wherein the acrylamide level is reduced by at least about 10%.
18. The method of claim 1, wherein said adding a water soluble multivalent cation comprises adding a water insoluble multivalent cation and an acid.
19. The method of claim 18, wherein said water insoluble multivalent cation comprises calcium hydroxide and wherein said acid comprises lactic acid.
20. The method of claim 8, wherein said adding a water soluble multivalent cation comprises adding a water insoluble multivalent cation and an acid.
21. The method of claim 20, wherein said water insoluble multivalent cation comprises calcium hydroxide and wherein said acid comprises lactic acid.